

Remarks

Claims 1-23 remain in the application. Claims 1, 7, 11, 17, and 23 are hereby amended. No new matter is being added.

Claim Objections

Claims 1-6 are objected to for not showing a gateway unit in FIG. 1. Claim 1 is hereby amended to clarify that no separate gateway unit is required in the claimed invention. With this amendment being made, applicant respectfully traverses this objection.

As amended, claim 1 now recites as follows:

1. A method of load balancing between a plurality of routers by automated resetting of gateways, the method comprising:
 - receiving a packet at a first router from a source host to be forwarded to a destination host;
 - applying an algorithm at the first router to select a second router to be a next gateway for the source host for packets destined to the destination host; and**
 - sending an ICMP redirect message from the first router to the source host to reset a default gateway of the source host to be the second router for packets destined to the destination host.

(Emphasis added.)

As shown above, a router is selected to be a next gateway. In other words, each of the routers may function as the gateway, and one is selected to be the next gateway to perform load balancing in accordance with an embodiment of the invention.

This selection of a router to be a next gateway is supported in the specification, for example, on page 4, lines 28-31 which recites as follows. "In

addition to forwarding the packet, the router **106-x** applies **206** a pre-configured algorithm to assign one of the router **106-y** as the next default gateway for that source host **102** for packets destined to the destination host **110**.”

Therefore, applicant respectfully submits that there is no separate gateway unit that needs to be included in the figures.

Claim Rejections -- 35 U.S.C. 112

Claim 11 was rejected under 35 U.S.C. 112, second paragraph, for lack of antecedent basis for the term “the source IP address”. This claim is hereby amended so as to overcome this rejection.

In particular, as amended, claim 11 now recites --a source IP address--. Therefore, applicant respectfully submits that this rejection is now overcome.

Claim Rejections -- 35 U.S.C. 103

Claims 1, 3, 6, 7, 9, 13, and 15

Claims 1, 3, 6, 7, 9, 13, and 15 were rejected under 35 U.S.C. 103 as being unpatentable over Datta et al in view of Chung et al. Applicants respectfully traverse this rejection in relation to the claims as hereby amended.

Amended claim 1 recites as follows.

1. A method of **load balancing between a plurality of routers by automated resetting of gateways**, the method comprising:
 - receiving a packet at a first router from a source host to be forwarded to a destination host;
 - applying an algorithm at the first router to select a second router to be a next gateway for the source host for packets destined to the destination host; and**
 - sending an ICMP redirect message from the first router to the source host to reset a default gateway of the source host to be the second router for packets destined to the destination host.**

(Emphasis added.)

As shown above, the claimed invention pertains to a technique for **load balancing between a plurality of routers by automated resetting of gateways.**

In Datta et al, a “central” controller **202** which performs the load balancing algorithm and determines which router **110** to use. See, for example, FIGS. 2 and 3 and related text of Datta et al. **In contrast to Datta et al, the invented technique does not require any such central controller. Instead, the load balancing algorithm is performed by each of the routers.**

The performance of the load balancing by the routers themselves, rather than a central controller, is a fundamental difference which clearly distinguishes the claimed invention over Datta et al.

Chung et al merely discloses ICMP redirects, but it does not disclose or suggest the above-discussed fundamental difference where the load balancing by the routers themselves, rather than a central controller. The claimed invention teaches an inventive use of ICMP redirects to implement the load balancing by the routers themselves.

Therefore, applicant respectfully submits that amended claim 1 is patentably distinguished over Datta et al in view of Chung et al.

Claims 3 and 6 depend from claim 1. Hence, applicant respectfully submits that claims 3 and 6 are now also patentable over the cited art.

Apparatus claim 7 is amended similarly as method claim 1. Hence, applicant respectfully submits that claim 7 is now patentable distinguished over Datta et al in view of Chung et al for at least the same reasons discussed above in relation to claim 1.

Claims 9, 13 and 15 depend from claim 7. Hence, applicant respectfully submits that claims 9, 13, and 15 are now also patentable over the cited art.

Claims 2, 4, 5, 8, 10-12 and 16

Claims 2, 4, 5, 8, 10-12 and 16 were rejected under 35 U.S.C. 103 as being unpatentable over Datta et al in view of Chung et al in further view of Inoue et al. Applicants respectfully traverse this rejection in relation to the claims as hereby amended.

Inoue et al does not disclose or suggest the above-discussed fundamental difference where the load balancing by the routers themselves, rather than a central controller.

Claims 2, 4, and 5 depend from claim 1. Hence, applicant respectfully submits that claims 2, 4, and 5 are now also patentable over the cited art for at least the same reasons discussed above in relation to claim 1.

Claims 8, 10-12 and 16 depend from claim 7. Hence, applicant respectfully submits that claims 8, 10-12 and 16 are now also patentable over the cited art for at least the same reasons discussed above in relation to claim 7.

Claim 14

Claim 14 was rejected under 35 U.S.C. 103 as being unpatentable over Datta et al in view of Chung et al in further view of Lamberton et al. Applicants respectfully traverse this rejection in relation to the claims as hereby amended.

Lamberton et al does not disclose or suggest the above-discussed fundamental difference where the load balancing by the routers themselves, rather than a central controller.

Claim 14 depends from claim 1. Hence, applicant respectfully submits that claim 14 is now also patentable over the cited art for at least the same reasons discussed above in relation to claim 1.

Claims 17-19, and 21-23

Claims 17-19 and 21-23 were rejected under 35 U.S.C. 103 as being unpatentable over Inoue et al in view of Datta et al. Applicants respectfully traverse this rejection in relation to the claims as hereby amended.

Amended claim 17 recites as follows.

17. A method of **load balancing between a plurality of routers by automated selection of a router to respond to an ARP request**, the method comprising:
- receiving an address resolution protocol (ARP) request at the plurality of routers from a requesting host from a source IP address in relation to a destination IP address;
 - applying an algorithm at each router to determine which single router is to respond to the ARP request; and**
 - sending an ARP reply from the responding router to the requesting host.
- (Emphasis added.)

As shown above, the claimed invention pertains to a technique for **load balancing between a plurality of routers by automated selection of a router to respond to an ARP request**.

In Datta et al, a "central" controller **202** which performs the load balancing algorithm and determines which router **110** to use. See, for example, FIGS. 2 and 3 and related text of Datta et al. **In contrast to Datta et al, the invented technique does not require any such central controller. Instead, the load balancing algorithm is performed by each of the routers.**

The performance of the load balancing by the routers themselves, rather than a central controller, is a fundamental difference which clearly distinguishes the claimed invention over Datta et al.

Inoue et al merely discloses ARP requests and replies, but it does not disclose or suggest the above-discussed fundamental difference where the load balancing by the routers themselves, rather than a central controller. The

claimed invention teaches an inventive use of ARP requests and replies to implement the load balancing by the routers themselves.

Therefore, applicant respectfully submits that amended claim 1 is patentably distinguished over Inoue et al in view of Datta et al.

Claims 18-19 and 21-22 depend from claim 17. Hence, applicant respectfully submits that these claims are now also patentably distinguished over the cited art.

Claim 23 is amended similarly to claim 17. Hence, applicant respectfully submits that claim 23 is now also patentably distinguished over the cited art for the same reasons as discussed above in relation to claim 17.

Claim 20

Claim 20 was rejected under 35 U.S.C. 103 as being unpatentable over Inoue et al in view of Datta et al in further view of Blair et al. Applicants respectfully traverse this rejection in relation to the claims as hereby amended.

Blair et al does not disclose or suggest the above-discussed fundamental difference where the load balancing by the routers themselves, rather than a central controller.

Claim 20 depends from claim 17. Hence, applicant respectfully submits that claim 20 is now also patentable over the cited art for at least the same reasons discussed above in relation to claim 17.

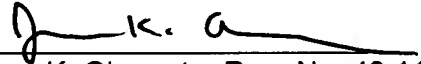
Conclusion

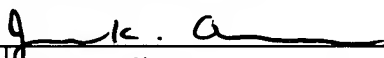
For the above-discussed reasons, applicant believes that the pending claims, as amended, now overcome the objections and rejections of the latest office action. Favorable action is respectfully requested.

If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 08-2025.

Respectfully Submitted,

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